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EXAMINER				
NEWLIN, TIMOTHY R				
ART UNIT		PAPER NUMBER		
2424				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/541,051

Applicant(s)

NEWTON ET AL.

Examiner

Timothy Newlin

Art Unit

2424

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Response to Amendment

The amendment overcomes the previous rejections; they are withdrawn in favor of the new rejections presented below.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 16 is rejected under §101 as covering non-statutory subject matter. The broadest reasonable interpretation of the recited "computer-readable medium" includes a signal *per se* and the specification does not limit the medium to a non-transitory tangible media. For further guidance see memo dated 1/26/2010 from USPTO Director David Kappos, "Subject Matter Eligibility of Computer Readable Media."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-6, and 9-16 are rejected under 35 U.S.C. 103 as unpatentable over OPENTV, WO 01/33852 in view of Goodman et al., US 6,427,238, and further in view of Knudson et al., US 6,536,041.

Regarding claim 1, OPENTV discloses a method and use of transmitting interactive television, whereby at least an interactive television application is transmitted inside application-modules in a broadcast stream that includes television content, wherein said method facilitates recording [p. 5, ll. 26-27] of said broadcast stream at a receiver, said method comprising the step of

Including storage related information for each of said application modules of the interactive application in a transmitted broadcast stream [p. 4, 32-35; p. 5, 26-27, pp. 6-7, lines 37-5]; and

wherein said storage related information

categorizes each said application module alternatively as mandatory for recording [if program is to be played immediately, the data objects are deemed *necessary*, p. 4, 31-32; flags are inserted identifying objects that *need* to be cached, p. 5, line 25-26], optional for recording [programs can be stored at the option of the user, p. 6, 38, p. 8, 26-27; modules categorized as within a validity range are available, p. 8, 5-7], or forbidden [live data objects are not stored, p. 3, line 20; objects categorized as outside their validity range are unavailable for storage, p. 8, 5-7] for recording at the receiver.

While OPENTV discusses mandatory and optional modules generally, it does not describe the different categories specifically as recited. In an analogous system, Goodman teaches transmitting interactive application modules wherein mandatory modules contain files that are critical for running a corresponding application from storage [col. 6, 7-18; col. 10, 30-34], and wherein optional modules comprise non-mandatory application modules which contain files that offer a corresponding application extra features [col. 6, 36-42]. Given OPENTV's discussion of module characteristics generally, it would have been obvious to one skilled in the art that modules essential for basic interactive functionality must be downloaded, while those merely offering enhancements might only be downloaded when bandwidth or storage space is readily available. One motivation, discussed in Goodman itself, is to conserve memory space in the set top box [col. 2, 1-7].

Neither Goodman or OPENTV specify whether certain modules must be downloaded from a live broadcast. Knudson teaches a real-time EPG system including "non-mandatory application modules [e.g., **controllable ticker is an optional application, cols. 13-14, ll. 49-13**] which contain files that...contain configuration information of the corresponding interactive application that always must be downloaded from a live broadcast" [categories such as sports contain status information that is necessarily downloaded from a live broadcast, i.e. real-time data, col. 14, 1-10; also see col. 13, 17-33, col. 17, 26-63]. Moreover, Knudson teaches that storage related information is transmitted in order to classify, i.e. categorize the files as real-time and consequently must be downloaded from a live broadcast [keys

uniquely identify real-time data, col. 12, 5-20]. Incorporating the teachings of Knudson would have been obvious to one skilled in the art in order to, among other things, avoid providing outdated status updates in the ticker **[see col. 10, 43-54, col. 17, 26-31].** The storage related information (e.g., keys) provide an association within the guide between event metadata and the broadcast of the event itself **[col. 12, 38-61],** enabling display integration **[e.g., Figs. 27a-c]** and allowing users to access the ticker information via the program listing.

Regarding claim 4, OPENTV discloses a method according wherein said storage related information further comprises module identification information **[p. 5, line 15; p. 7, 24-28].**

Regarding claim 5, OPENTV discloses a method wherein the step of including storage related information comprises including said storage related information in an Application Information Table **[file table, p. 3, 5-19]** and/or in a Download Information Indication message.

Regarding claims 6 and 12, OPENTV discloses a method wherein said module identification information is defined and included in the AIT and consists of an application ID having two fields, the first field being an organisation_id **[e.g., version number or carousel ID, p. 5, 13-16]** and the second field being an application_id **[object identifiers are transmitted, p. 2, line 35],** wherein said id values are used to

identify identical applications **[version numbers are used by the receiver to identify identical versions, for example to filter incoming data objects, p. 5, 24-28]** in different broadcasts so that, with respect to recording of said broadcast stream at the receiver, any given application is stored only once on a specific storage medium **[p. 6, line 36-p. 7, line 2]**.

Regarding claim 9, OPENTV discloses a method whereby said storage related information further comprises signaling of properties of an application module chosen from code and/or data **[p. 5, 29-30]** and/or Fixed or Variable,

Wherein each application module property is flagged via corresponding flag as one selected from the group consisting of

code, data, and both code and data, and

fixed and variable **[p. 6, line 36-p. 7, line 2; also see Goodman, col. 6, 9-33 and 45-67, col. 7, 27-34]**.

Regarding claims 10 and 11, OPENTV discloses a method of receiving an interactive television broadcast stream for recording, whereby at least an interactive television application is comprised in the broadcast stream inside application-modules, said method comprising the steps of

extracting storage related information for each of said modules from said broadcast stream **[p. 5, 12-18]**, and

recording modules which are mandatory or optional for recording, based on said storage related information **[flags indicate data objects that *need* to be recorded, p. 5, 24-28]**;

characterized in that said storage related information comprises categories indicating whether said modules are alternatively mandatory for recording **[if program is to be played immediately, the data objects are deemed *necessary*, p. 4, 31-32; flags are inserted identifying objects that *need* to be cached, p. 5, line 25-26]**, optional for recording **[programs can be stored at the option of the user, p. 6, 38, p. 8, 26-27; modules categorized as within a validity range are available, p. 8, 5-7]**, or forbidden **[live data objects are not stored, p. 3, line 20; objects categorized as outside their validity range are unavailable for storage, p. 8, 5-7]** to be recorded.

While OPENTV discusses mandatory and optional modules generally, it does not describe the different categories specifically as recited. In an analogous system, Goodman teaches transmitting interactive application modules wherein mandatory modules contain files that are critical for running a corresponding application from storage **[col. 6, 7-18; col. 10, 30-34]**, and wherein optional modules contain files that offer a corresponding application extra features **[col. 6, 36-42]**. Given OPENTV's discussion of module characteristics generally, it would have been obvious to one skilled in the art that modules essential for basic interactive functionality must be downloaded, while those merely offering enhancements might only be downloaded when bandwidth or storage space is readily available. One motivation, discussed in Goodman itself, is to conserve memory space in the set top box **[col. 2, 1-7]**.

Neither Goodman or OPENTV specify whether certain modules must be downloaded from a live broadcast. Knudson teaches a real-time EPG system including “non-mandatory application modules [**e.g., controllable ticker is an optional application, cols. 13-14, ll. 49-13**] which contain files that...contain configuration information of the corresponding interactive application that always must be downloaded from a live broadcast” [**categories such as sports contain status information that is necessarily downloaded from a live broadcast, i.e. real-time data, col. 14, 1-10; also see col. 13, 17-33, col. 17, 26-63**]. Moreover, Knudson teaches that storage related information is transmitted in order to classify, i.e. categorize the files as real-time and consequently must be downloaded from a live broadcast [**keys uniquely identify real-time data, col. 12, 5-20**]. Incorporating the teachings of Knudson would have been obvious to one skilled in the art in order to, among other things, avoid providing outdated status updates in the ticker [**see col. 10, 43-54, col. 17, 26-31**]. The storage related information (e.g., keys) provide an association within the guide between event metadata and the broadcast of the event itself [**col. 12, 38-61**], enabling display integration [**e.g., Figs. 27a-c**] and allowing users to access the ticker information via the program listing.

Regarding claim 13, OPENTV discloses a method whereby said interactive television is MHP, OpenTV or DASE [**Summary section describes OPEN protocol. pp. 2-3**].

With respect to claim 14, OPENTV discloses an apparatus for recording and/or playing back interactive television, said apparatus being adapted to record and/or playback an interactive television broadcast stream to and from a storage medium respectively, said apparatus being adapted to receive said interactive television broadcast stream, said broadcast stream including television content, an interactive television application contained in modules, and storage related information for each of said modules, said apparatus comprising

means for extracting storage related information of said modules from said broadcast stream [p. 5, 12-18], and

means for recording modules in dependence on said storage related information, **[receiving station 18 and mass storage device 16, Fig. 1]**

characterized in that said storage related information comprises categories indicating whether said modules are alternatively mandatory for recording **[if program is to be played immediately, the data objects are deemed *necessary*, p. 4, 31-32; flags are inserted identifying objects that *need* to be cached, p. 5, line 25-26]**, optional for recording **[programs can be stored at the option of the user, p. 6, 38, p. 8, 26-27; modules categorized as within a validity range are available, p. 8, 5-7]**, or forbidden **[live data objects are not stored, p. 3, line 20; objects categorized as outside their validity range are unavailable for storage, p. 8, 5-7]** to be recorded, and said means for recording being adapted to record only modules for which said storage related information allows recording.

Neither Goodman or OPENTV specify whether certain modules must be downloaded from a live broadcast. Knudson teaches a real-time EPG system including “non-mandatory application modules **[e.g., controllable ticker is an optional application, cols. 13-14, ll. 49-13]** which contain files that...contain configuration information of the corresponding interactive application that always must be downloaded from a live broadcast” **[categories such as sports contain status information that is necessarily downloaded from a live broadcast, i.e. real-time data, col. 14, 1-10; also see col. 13, 17-33, col. 17, 26-63]**. Moreover, Knudson teaches that storage related information is transmitted in order to classify, i.e. categorize the files as real-time and consequently must be downloaded from a live broadcast **[keys uniquely identify real-time data, col. 12, 5-20]**. Incorporating the teachings of Knudson would have been obvious to one skilled in the art in order to, among other things, avoid providing outdated status updates in the ticker **[see col. 10, 43-54, col. 17, 26-31]**. The storage related information (e.g., keys) provide an association within the guide between event metadata and the broadcast of the event itself **[col. 12, 38-61]**, enabling display integration **[e.g., Figs. 27a-c]** and allowing users to access the ticker information via the program listing.

Regarding claim 15, OPENTV discloses an apparatus whereby said storage related information comprises module identification information for modules, and whereby said apparatus further comprises means for preventing recording of more than one application module in different broadcasts with identical module identification

information on a storage medium in said apparatus **[version numbers are used by the receiver to identify identical versions, for example to filter incoming data objects, p. 5, 24-28; p. 6, line 36-p. 7, line 2].**

Regarding claim 16, OPENTV discloses a computer-readable medium having embodied thereon a computer program for processing by a computer, said computer program causing said computer to prepare and transmit an interactive television broadcast stream facilitating recording by a receiver, the computer program comprising

a code segment for causing the computer to include application modules and storage related information for each of the application modules in an interactive television broadcast stream, at least an interactive television application being included inside said application modules **[broadcast station 12 and application execution engine perform the method disclosed in OPENTV, see Summary, pp.2-3; p. 4, 11-35];**

a code segment for causing the computer to transmit the interactive television broadcast stream **[p. 4, ll. 26-29; p. 4, 11-35],**

characterized in that said storage related information comprises categories indicating whether said modules are alternatively mandatory for recording **[if program is to be played immediately, the data objects are deemed necessary, p. 4, 31-32; flags are inserted identifying objects that need to be cached, p. 5, line 25-26],** optional for recording **[programs can be stored at the option of the user, p. 6, 38, p. 8, 26-27; modules categorized as within a validity range are available, p. 8, 5-7],** or

forbidden **[live data objects are not stored, p. 3, line 20; objects categorized as outside their validity range are unavailable for storage, p. 8, 5-7]** to be recorded.

While OPENTV discusses mandatory and optional modules generally, it does not describe the different categories specifically as recited. In an analogous system, Goodman teaches transmitting interactive application modules wherein mandatory modules contain files that are critical for running a corresponding application from storage **[col. 6, 7-18; col. 10, 30-34]**, and wherein optional modules contain files that offer a corresponding application extra features **[col. 6, 36-42]**. Given OPENTV's discussion of module characteristics generally, it would have been obvious to one skilled in the art that modules essential for basic interactive functionality must be downloaded, while those merely offering enhancements might only be downloaded when bandwidth or storage space is readily available. One motivation, discussed in Goodman itself, is to conserve memory space in the set top box **[col. 2, 1-7]**.

Claims 2, 3, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over OPENTV, Goodman, and Knudson as cited above, in view of Metz et al., US 5,678,539.

Regarding claim 2, OPENTV does not disclose using DSMCC modules to transmit application data. Metz teaches this method at **col. 10, 5-12]**. One of ordinary skill would have been motivated to format the data modules disclosed in OPENTV for

transmission via DSMCC protocol, in order to provide a standard data format usable by a wide range of receivers. Metz articulates the need for a standard interface protocol [col. 4, 53-64]. Using DSMCC provides a standard protocol that can be used across different receiver platforms.

Regarding claim 3, OPENTV discloses a method wherein said at least one application object comprises at least one application file object and at least one application directory object, said application file object comprising at least one application file and said at least one application directory object comprising storage directory information on respective application file [p. 3, 5-6; p. 5, 14-16].

Regarding claim 8, OPENTV discloses a system that generates groups of modules with similar storage related information via use of the application module property flags in an object carousel for broadcasting **[carousels are groups of data objects that are transmitted together, with corresponding version numbers and carousel references, pp. 7-8, lines 26-2; p. 8, lines 22-28]** wherein fixed files are grouped together, and wherein code files and data files are respectively grouped together and stored separately **["together" and "separately," in the context of digital storage media, are vague in that they could refer to a directory structure, the physical memory location, etc. As recited the limitation is met by OPENTV at p. 5, 29-30 and p. 6, line 36-p. 7, line 2; and Goodman at col. 6, 9-33 and 45-67, col. 7, 27-34].**

As discussed above, Metz teaches the use of DSMCC protocol.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Newlin whose telephone number is (571)270-3015. The examiner can normally be reached on M-F, 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRN
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